ICM VERTICAL Fall Arrest System

User Manual Part 1: Daily use

For instructions on how to install and inspect see the User Manual Part 2 for the ICM VERTICAL Fall Arrest System.

Important information on the ICM VERTICAL Fall Arrest System

The ICM VERTICAL Fall Arrest System consists of a guided type fall arrester and a rigid anchor line.
The guided type fall arrester must be the ICM Fall Arrester or the Protecta Cabloc AC350/4 fall arrester.
The rigid anchor line must be an 8 mm steel wire rope.

All components of the ICM VERTICAL Fall Arrest System, except the Protecta Cabloc AC350/4 fall arrester, must be supplied by ICM-ArSiMa A/S.

This manual is for the ICM Fall Arrester, for the Protecta Cabloc AC350/4 fall arrester consult the manual supplied with the Protecta Cabloc AC350/4 fall arrester.

If a Protecta Cabloc AC350/4 fall arrester is used with the ICM VERTICAL Fall Arrest System, make sure the fall arrester has been inspected by a competent person within the last 12 months.

Only when the complete fall arrest system, incl. guided type fall arrester, is supplied by ICM we have full product responsibility. For avoidance of any doubt, if the guided type fall arrester is not supplied by us then any claims or liability matters, including but not limited to product responsibility, regarding this item, shall be addressed directly to the supplier of this item.

This manual must be made available to the user and installer in the official languages of the country of destination. It must be read and understood by both the user and installer before using and installing the system.

Follow the guidelines for PPE related to the use and installation of the system.

Be aware that any alterations of components, misuse of the system and related PPE, or not following the instructions given by the manufacturer is not allowed.

Questions regarding installation, use, maintenance, or choice of product to suit the application can be addressed to ICM-ArSiMa A/S.

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CE type approval of the ICM VERTICAL Fall Arrest System

The ICM VERTICAL Fall Arrest System is designed and tested to standards

EN 353-1:2002,
prEN 353-1:2008 and
RfU CNB/P/11.073

according to PPE Directive 89/686/EEC §10 EC type examination at notified body:

FORCE-Certification A/S
Park Allé 345
2605 Brøndby
Denmark
Notified body No. 0200.

The control test according to PPE Directive 89/686/EEC§11A is done at above-mentioned notified body.

This document is part of the CE approval for the complete system.

Additional testing

The ICM Vertical Fall Arrest System has also been submitted to “Fall Back testing using an anthropometric dummy” by TUV NEL Scotland, November 9th 2007, certificate no. PPE700000 MTHU.

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1. INSTRUCTIONS ON DAILY USE

1.1. Before use

- Make a visual and operating inspection of the ICM Fall Arrester before use. Inspect the condition of the cable grab and energy absorber, mechanical function of the locking lever and karabiners. Inspect for any kind of deformation.
- Inspect the condition of the installed system in general. Inspect the wire rope; search for broken strands, increased slack, and movement of the swaged ferrule.
- Inspect the ladder or ladder structure in regards to safe climbing.
- Check the system identity label for date of last inspection. Do not use a system, which has not been inspected within the last 12 months.
- Inspect the harness and other fall arrest equipment according to the manufacturer's instructions. Do not use these components, if they have not been inspected the last year.
- Do not use a system, which does not pass this inspection.

For additional guidelines on how to inspect the ICM VERTICAL Fall Arrest System, both as a Visual and Formal Inspection, see section 4.0 of the User Manual Part 2.

1.2. What to consider

Before using the system, consider all factors that have impact on the safety of the user, i.e.:

- Does the user have access to anchorage points and fall arrest or restraint equipment that will keep the user safe when connecting and disconnecting from the system?
- Has the user taken proper precautions against possible hazards in the working environment (like welding sparks, moving machines, chemicals, etc.), which could injure the user or damage the system?
- When working at heights, do not carry items preventing the user of the system from having both hands free for climbing, and always make sure that carried items are secured from dropping.
- Is the weather suitable for climbing? Avoid climbing in strong winds and at extreme temperatures.
- When climbing long distances, does the system provide suitable resting areas during ascent or descend to avoid fatigue?
- Is the user of the system under observation by backup personnel in case of a fall, has a suitable rescue plan been made available for all implicated parties, and are they able to implement it?

1.3. Training

The owner and the user of the system are responsible for knowing and observing the instructions given in the User Instruction and System Installation Manual. They must also be trained in the system application limits and the consequences of misusing the ICM VERTICAL Fall Arrest System.

IMPORTANT: Training in how to climb the system is required on a periodic basis. When training, the users may never be exposed to a fall hazard.

1.4. Climbing on the system

1) Follow the manufacturer instructions when fitting the harness to the user.
2) Follow the instructions in this manual when connecting the ICM Fall Arrester to the wire rope.
3) Follow the instructions in this manual and in the manual of the harness when connecting the ICM Fall Arrester to the front attachment point on the full body harness (approved to EN361 or EN361+EN358).
4) When ascending just climb up the ladder equipped with wire rope guides. The ICM Fall Arrester will automatically follow the movement of the climber. To pass the wire rope guides pull gently on the wire rope, and it will be released from the wire rope guide. Once the ICM Fall Arrester has passed the wire rope guide, press the wire rope back in place and climb on.
   Warning: Never disconnect the ICM Fall Arrester in order to pass a wire rope guide.
5) When descending just climb down the ladder. The ICM Fall Arrester will lead the climber down when climbing in a normal position. In certain positions, i.e. when leaning backwards, the ICM Fall Arrester may lock on the wire rope. To unlock, simply climb slightly upwards and continue down in normal position.
6) Be extra careful the first 2 meters when starting to climb.

2. INSTRUCTIONS ON THE FALL ARRESTER

IMPORTANT: Before using the ICM Fall Arrester with the ICM VERTICAL Fall Arrest System, then section 2.0 of the User Instruction Manual for the ICM VERTICAL Fall Arrest System must be made available to the user, and the user must read, understand, and follow the instructions given in the manual.

When using the ICM Fall Arrester with the ICM VERTICAL Fall Arrest System, then this User Instruction Manual supersedes any other manual, which might refer to the product.

2.1. General information

The ICM VERTICAL Fall Arrest System is a personal protective equipment against falls from a height. It consists of a guided type fall arrester sliding on a rigid anchor line. The fall arrester and the fall arrest system are tested according to standard EN 353-1:2002, prEN353-1:2008, RFU CNB/P/11.073 and TUV NEL Fall-Back Test.

Do not substitute any component.

In case of a fall the fall arrester is automatically locked on the wire rope, and depending on the forces put on the wire rope the energy absorber permanently connected to the fall arrester may open and be extended.

The arrest length of a fall will limit itself to less than 1 m. Once the system has arrested a fall, the system must be replaced immediately.

The ICM Fall Arrester for the ICM VERTICAL Fall Arrest System is only to be operated on 8 mm stainless steel wire rope (7x19) or 8 mm galvanized steel wire rope (7x19), and both must be supplied by ICM-ArSiMa A/S.

The weight of the user, including clothing and equipment, shall not be less than the minimum rated load marked on the guided type fall arrester.

2.2. How to connect the ICM Fall Arrester to the wire rope

For reference number – see pictures below.

1) Check the direction of operating as indicated on the fall arrester (the arrow on the fall arrester must point in upwards direction)
2) Remove the karabiner located on the cable grab of the fall arrester
3) Push the lever upwards
4) Tilt the cable grab of the fall arrester to horizontal position and insert it on the wire rope
5) Return the cable grab of the fall arrester to vertical position; the wire rope channels will embrace the wire rope
6) Let go off the lever, and the cable grab of the fall arrester will grab on the wire rope
7) Lock the fall arrester by replacing the karabiner on the cable grab

1)

2)

3)

4)

5)

6)

7)

WARNING: NEVER OPERATE THE FALL ARRESTER UNLESS THE KARABINER ON THE SHOCK- ABSORBING LANYARD IS LOCKED TO THE STEEL CABLE GRAB OF THE FALL ARRESTER (SEE PICTURE 7).

FUNCTION TEST: Move the fall arrester by hand on the wire rope making sure it is placed in the correct direction of operating. Pull with light force downwards on the energy absorber to make sure the fall arrester remains locked on the wire rope.

WARNING: The system shall be designed so that the user is safe when connecting or disconnecting from the ICM VERTICAL Fall Arrest System. In case this is not possible and a fall hazard exists when connecting or disconnecting from the system, then always use an alternative fall arrest system as backup.

2.3. Important information on the ICM Fall Arrester karabiners

- The karabiners that are part of the ICM Fall Arrester are approved to EN 362.
- Use only the karabiners originally supplied with the ICM Fall Arrester. Never substitute the karabiners.
- Inspect the karabiners before use; check for deformation, signs of wear, corrosion, and that the double function twistlock system operates correctly.
- If the karabiners do not function correctly, the product must be withdrawn from use and be inspected by a competent person. See back page for information on being competent.
- During use, always protect the karabiner from hazards in the work environment, i.e. electrical hazards, extreme temperatures, mechanical impact, moving machinery, chemicals and acids, etc.
- Clean the karabiner from time to time and store the karabiner with the rest of the equipment in a ventilated room at normal room temperature.
- The karabiner must be inspected at least once a year together with the rest of the equipment by a competent person. See back page for information on being competent.

2.4. Connecting the ICM Fall Arrester to the harness

Only connect the ICM Fall Arrester to a full body harness approved to EN361 or EN361+EN358. Never operate the system only wearing a waist belt. The harness attachment point should be at the position of the sternum i.e. a front attachment point. Never operate the system only wearing a waist belt.

Connection between the ICM Fall Arrester and the harness must be done immediately after the ICM Fall Arrester is connected to the wire rope. When connected make sure the karabiners are locked.

When disconnecting from the wire rope at heights always disconnect the ICM Fall Arrester from the wire rope. Do not leave it on the system as it could be removed and thereby not be available when climbing down again.

WARNING:

The full body harness should be properly adjusted to snug fit and should not be used if loose.

Never insert items and extend the distance between the front attachment point of the harness and the karabiner on the energy absorber permanently connected to the cable grab of the ICM Fall Arrester.

Never subtract items and shorten the distance between the front attachment point of the harness and the karabiner on the energy absorber permanently connected to the cable grab of the ICM Fall Arrester.

For the first two metres the user may not be protected against hitting the ground, extra care should be taken when ascending or descending.

For those systems which permit more than one user there should be a minimum distance of 3 m between the feet of the upper person and the head of the lower person.

Engaging the guided type fall arrester's release function or handling the guided type fall arrester during ascent or descent can hinder the safe operation of the braking mechanism.

It is essential for the safety of the user that any engagement of the guided type fall arrester's release function or handling of the guided type fall arrester during ascent or descent is only carried out from a safe position where there is no risk of a fall.

The guided type fall arrester shall not be used for work positioning. If work positioning is required, a separate system shall be used.

The coldest temperature at which the guided type fall arrester including the rigid anchor line may be used is -30°C.

2.5. Important recommendations

1) Make a visual and operating inspection before use. Check the condition of the cable grab and the energy absorber, mechanical function of the locking lever and karabiners, inspect for any kind of deformation.
2) Inspect the condition of the wire rope; search for broken strands and movement of the swaged ferrule.
3) Make sure the harness, the fall arrester, and the wire rope system are compatible. See section 2.4 of this manual for details. If in doubt, ask your organisations EHS representative, ICM-ArSiMa A/S or the manufacturer of your harness.
4) The ICM Fall Arrester should be assigned for personal use.
5) Make sure the equipment and system registration cards are filled in and up to date. All inspections must be logged, and do not use equipment where last inspection exceeds more than a year.
6) The top anchor must be above the user as described under the system installation. The load requirements for the top anchor must be fulfilled – see section 4.3 and Appendix A for requirements and the system identity label for the actual limitations.
7) The wire rope must be tight.
8) If the fall arrester fails a visual inspection, or there is any doubt regarding the condition of the equipment, then the fall arrester must be withdrawn from use immediately and be inspected by a competent person. See back page for information on being competent.
9) If the system has arrested a fall, it must be replaced.
10) During use, always protect the fall arrester from hazards in the work environment, i.e. welding waste and sparks, electricity, extreme temperatures, mechanical impact, moving machinery, chemicals and acids, etc.

11) All components that are part of the ICM VERTICAL Fall Arrest System must be inspected at least once a year by a competent person. See back page for information on being competent.
12) Never disassemble and reinstall the ICM VERTICAL Fall Arrest System without being a competent person. See back page for information on being competent.

2.6. Maintenance, storage, and data logging

The ICM Fall Arrester is maintenance free; however, it should be cleaned on regular basis with a dry cloth.

Store the unit in a ventilated room at normal room temperature. The unit may not be exposed to sunlight or corrosive environment. Protect the unit during transportation.

Always remember to store the registration cards in a safe area known to the user.

2.6.1. Registration card for the ICM Fall Arrester

Reference no.: _____

Serial no.: _____

Production year: _____

Date of purchase: _____

Date of first use: _____

Equipment assigned to: _____

Inspections:

Date	Initials and company	OK

Date	Initials and company	OK

Comments:

Warranty:

Provided the component is supplied by ICM-ArSiMa A/S, either directly or through a retailer, then we offer a warranty of one year from the date of installation for all components of the ICM VERTICAL Fall Arrest System, provided this period shall not exceed 18 months from the date of purchase from ICM-ArSiMa A/S.

The warranty does not cover component damages caused by vandalism, shipping, or other types of damage not controllable by ICM-ArSiMa A/S.

The warranty only covers ICM VERTICAL Fall Arrest Systems that are installed, inspected, and serviced by competent personal.

A competent person:

By being competent in installing, inspecting, and servicing the ICM VERTICAL Fall Arrest System we as the manufacturer expect the following:

A competent person has received training by the manufacturer or knows from experience how to inspect, service, and use a wire system approved to EN 353-1. A competent person has read and fully understood the user manual Part 1 and 2, and he/she is fully aware of the proper use, limitations, and possible misuse of the system. If required by the manufacturer or the customer, competent personal must be able to document their qualifications.

If you doubt whether you or your employees are competent to install, inspect, and service the ICM VERTICAL Fall Arrest System, then contact ICM-ArSiMa A/S for further guidance.

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